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ABSTRACT

Following the passage of the Employee Retirement Income Security Act of 1974 and the increased regulatory burden placed on defined benefit pension plans, the less complex fully funded defined contribution plan emerged as a more attractive and increasingly popular alternative. Traditionally the standard approach to pensions in the educational community, defined contribution plans are now growing in other sectors. They give individuals an active role in investment of plan contributions, since responsibility for investment decisions rests with individual participants. Personal financial responsibility also extends to arrangements for supplemental annuity support and additional personal savings. Good decisions depend on relevant and reliable information. Current consumption needs and future savings needs often conflict. Individuals may erect barriers to savings that make it difficult to achieve adequate retirement security. Service providers, employers, and individuals can work together to understand the barriers better and devise ways to overcome them. Vested-interest theory can be particularly useful in helping communicators convince people to translate their high regard for future retirement security into actions to achieve it. (MSE)

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Planning for Retirement — The Age of Individual Responsibility

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Planning for Retirement — The Age of Individual Responsibility

In this issue:

Growth of Defined Contribution Plans
Defined Contribution — A Vital Role for Individual Participants
Value of Information in Defined Contribution Plans
Financial Planning in Baby-Boomer Households
Overcoming Barriers to Savings Actions
Applying Vested-Interest Theory to Changing Behavior
Conclusion

The substantial growth of defined contribution plans since the passage of ERISA in 1974 underscores an important point about them — individual participants are responsible for their own asset allocation decisions as they direct plan contributions to individual annuity accounts. Clear plan communications and financial educational materials are critical to the success of such participant-directed accounts. Participants also require good financial-planning skills for building the personal savings they need to supplement pension and Social Security benefits for an adequate retirement income.

However, there are many barriers to implementing individual savings strategies — both for effective asset allocation in employer pension plans and for personal savings. We asked the economists B. Douglas Bernheim and Laurence J. Kotlikoff and the social psychologists William D. Crano and Gary W. Selnow to analyze the factors that undermine efforts to assure future financial security. Their research suggests further ways that employees, employers, and service providers can work together to improve individual retirement saving.

Growth of Defined Contribution Plans

In today's pension world, the focus of attention on defined contribution plans, where individual participants play an active role, can be traced back to the passage of the Employee Retirement Income Security Act of 1974 (ERISA). While ERISA set up reporting, disclosure, and vesting requirements for all types of private pension plans, it was aimed primarily at defined benefit plans. Many of those plans had become seriously underfunded. Lengthy vesting provisions left many terminating employees without coverage, and terminations of poorly funded plans not infrequently deprived even vested workers of promised benefits.

ERISA led to extensive federal regulation. Employers with defined benefit plans soon learned that ERISA compliance is complicated and involves extensive record keeping, valuations, and certifications, as well as insurance premiums under the requirements of the Pension Benefit Guaranty Corporation (PBGC).

As a result, the number of defined contribution plans began to increase after ERISA was passed. The proportion of workers actively participating in private defined contribution plans for primary (not supplemental) coverage increased from 13 percent in 1975 to 32 percent in 1987; over the same period, the proportion whose primary coverage was in defined benefit plans fell from 87 percent in 1975 to 68 percent.[1]

For supplemental coverage, defined contribution plans also grew rapidly. In 1975, 20 percent of workers with primary coverage under a defined benefit plan had supplemental coverage under a defined contribution plan; by 1987 that figure had reached 39 percent.[2] The Revenue Act of 1978 stimulated for-profit employers to utilize the defined contribution approach by setting up primary or supplementary salary-reduction plans under Sec. 401(k) of the Internal Revenue Code.

Another sign of an increased role for defined contribution plans was the introduction in 1986 of a defined contri-

Defining the Plans — Defined Benefit and Defined Contribution

Defined benefit plans promise each participant a specific benefit, usually determined by a formula, e.g., final average salary times years of service times a percentage factor, such as 1 1/2 or 2 percent. The employer must accumulate the funds needed to pay the benefit; the employer's costs will vary depending on investment returns, turnover, and mortality factors.

In *defined contribution plans*, employers promise to transfer specified, regular contributions, usually stated as a percentage of a participant's salary, into each participant's pension account. The benefit is determined by the value of the fund when the worker retires. In these plans, the benefits at and after retirement will vary, depending on the funds accumulated and rates of investment return and annuitant mortality experience.

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bution component for the Federal Employees' Retirement System, the Thrift Savings Plan. Under that plan, participants may allocate contributions to one or more of three major funds: a U.S. government securities fund; a common stock index fund; and a bond index fund.

Defined Contribution — A Vital Role for Individual Participants

Individual participants are called on to play an active role in defined contribution plans. Typically, they choose among a variety of annuity or custodial investment accounts, determine the allocation of contributions to the accounts, and can transfer assets among accounts during the accumulation period. At retirement, they select a lifetime annuity or other income options.

Defined contribution annuity plans did not originate as the flexible vehicles they are now. Until the early 1950s, contributions under traditional "money purchase" annuity plans were invested in a single fixed-income annuity contract. But in 1952, a significant change took place in the capacity of defined contribution plans to diversify their investment base and, consequently, to change the asset allocation role of plan participants.

The innovation was developed by William C. Greenough, then a vice president of TIAA, and described in his monograph *A New Approach to Retirement Income*. It led to TIAA's introduction of the College Retirement Equities Fund (CREF), offering a totally new type of annuity — a variable (or unit) annuity, based on a common stock fund — as a companion to the traditional TIAA fixed-income annuity.

The variable annuity was probably one of the most important pension developments of the twentieth century. By adding annuity accumulations and payouts based on diversified equity and other market-valued investments, the new approach added dramatically to the range of individual investment choice. Certainly it strengthened the capacity of defined contribution pensions to respond to changing economic and investment conditions in support of retirement living. At the same time it increased the responsibility of individual participants for the allocation of assets to different annuity accounts. It also increased the responsibility of service providers and employers for maintaining technical expertise themselves and communicating decision-making information to plan participants.

Examples of TIAA-CREF Information Resources

Resources for Administrators

- *1994-95 TIAA-CREF Communications Guide* — lists all TIAA-CREF publications for administrators and individuals
- Retirement illustration software — counsels participants on the potential benefits from any TIAA-CREF retirement income option
- TDA calculation software — computes participants' maximum salary reduction contribution amounts for tax-deferred annuities
- Nondiscrimination testing software — helps plan administrators meet nondiscrimination guidelines
- *TIAA-CREF Video Communications* — lists video tapes available from TIAA-CREF
- TIAA-CREF's interactive administration guide — for PCs using DOS or Windows, contains instructions on all aspects of administering a pension plan, including enrollment, premium remittance, and compliance

The Library Series (a family of booklets for administrators and participants)

- *Just Starting Out*—introduction to fundamentals of personal finance
- *Guiding Your Retirement Savings* — guide to TIAA-CREF retirement annuities
- *Charting TIAA and the CREF Accounts* — information on TIAA and CREF rates of return, updated quarterly
- *Understanding How CREF Units Work* — explanation of the valuation of CREF accumulation and annuity units
- *Looking Ahead to Retirement* — planning guide for people about ten years from retirement
- *Comparing TIAA-CREF Income Options* — description of TIAA-CREF income-payment options
- *Estimating Your Retirement Income* — analysis of TIAA-CREF income illustrations
- *Taxes and Your Retirement Annuities* — information on how income taxes affect retirement annuities before and during retirement
- *Making Sense of Social Security* — explanation of Social Security's retirement, disability, and survivor benefits
- *Planning for Health Coverage in Retirement* — description of Medicare, Medigap, and long-term care insurance programs

Other Information for Administrators and Participants

- Financial Education Series — seminars and workbooks for participants on planning for retirement income, investments, and setting income goals
- *Selecting a Retirement Company and Investment Funds* — information for staff members making a first decision about a retirement carrier
- *Building Your Portfolio with TIAA-CREF* — guide to allocation choices, with model portfolios to achieve different objectives
- *A Practical Guide to Minimum Distribution* — information on how to satisfy applicable federal tax rules
- *Financial Terms Made Simple* — guide to the language of finance

Copies of the publications and software listed above can be obtained by calling 1 800 842-2733, ext. 3667.

TIAA-CREF information can also be found on the Internet. The URL is: gopher://gopher.tiaa-cref.org

Value of Information in Defined Contribution Plans

In defined contribution plans, full information about plan provisions, investment accounts, and benefit options is vital to both employer and employee. Employers and service providers necessarily play an active role in providing strong ongoing communications — descriptive booklets, information seminars, benefit fairs, and counseling opportunities. These functions complement basic plan strengths, help maximize the value of an institution's considerable investment in employee retirement security, and respond to legal and other requirements to provide necessary decision-making information. (As an illustration of the types of communications, a selective list of the broad range of information currently provided by TIAA-CREF for administrators and plan participants is given in the box on page 2.)

Section 404(c) rules. Sec. 404(c) of ERISA outlines certain voluntary rules for plans with participant-directed accounts. To qualify for protection under the Sec. 404(c) rules, a plan must meet four requirements:

(1) A plan must give participants the opportunity to choose from a broad range of investment alternatives, including at least three core diversified investment options;

(2) Participants must be allowed to transfer among investment alternatives with appropriate frequency;

(3) The core investment alternatives must internally diversify account investments;

(4) Participants must be provided with sufficient information to make informed investment decisions.

If the rules are followed in structuring the plan and providing information, a participant who exercises control over his or her accounts is not deemed to be a fiduciary; and no person who is otherwise a fiduciary (e.g., an employer) is liable under ERISA's fiduciary responsibility rules for any losses that might result from a participant's decisions respecting the account. Fiduciaries are not relieved of their duty to consider the prudence of the investment alternatives made available to participants under the plan or to maintain oversight over the investment options.

Financial Planning in Baby-Boomer Households

Financial decisions about participant-directed accounts are inevitably related to the other components of wealth acquisition in a household, such as personal savings, consideration of the role of Social Security, life insurance protection — and, of course, current spending needs.

To help put the factors affecting retirement savings in context, and to clarify how employee information programs might be improved, we asked economists B. Douglas Bernheim of Stanford University and Laurence J. Kotlikoff of Boston University to examine and comment on the state of overall personal financial planning for baby-boomer households, ages 29–47. In reviewing a wide range of recent financial research, they considered adequacy of savings and insurance, awareness of financial vulnerabilities, degrees of actual as well as perceived financial literacy, and the relationship of financial literacy to financial decisions, as well as the effect on saving of the type of financial information the households receive.

Bernheim and Kotlikoff described a number of key findings[1]:

- *Widespread undersaving by American baby-boomer households.* The typical baby-boomer household appears to be saving significantly less than half the amount needed to sustain its living standard in retirement. And personal savings as a percent of disposable personal income has dropped from 9.3 percent in 1974, to 6.1 percent in 1984, to 3.9 percent in the second quarter of 1994.[2] In light of probable economic developments over the next few decades, there is a significant risk that baby boomers, unless they take special measures, will actually fare worse in retirement than their parents.
- *Inadequate life insurance.* Financial planning for family protection appears inadequate for dealing with contingencies, such as the death of a spouse. Somewhere between 30 and 40 percent of middle-aged American households are underinsured for life insurance. Because of this, they risk declines of one-third or more in living standards.
- *Low rates of financial literacy.* Lack of financial acumen among these households leads to common financial mistakes, such as failure to take advantage of tax-deferral opportunities, insufficient asset diversification, excessive conservatism in investment portfolio choices, use of costly methods of borrowing, and failure to analyze financial propositions adequately. Relative age, it is found, is unrelated to financial literacy.
- *Unrealistic optimism.* A widespread failure to understand financial vulnerabilities appears to be leading many baby-boomer households to undersave. Many are very unrealistic. Even among those who are the least well-prepared financially (relative to earnings), more than half regard their personal finances as secure or very secure, and only about one-third believe that their standard of living will decline in retirement.
- *Limited information sources.* About 60 percent of every examined population subgroup relies primarily on parents, relatives, friends, and personal judgement for financial information and advice. The fraction relying primarily on financial professionals and print media does not exceed 40 percent for any population subgroup. Most individuals lack an authoritative, reliable source of financial information and advice.
- *Behavior not motivated solely by quantitative targets.* Traditional financial planning is based on a targeted savings approach. Under this approach, a

household is expected to specify or target its desired level of retirement income as well as future special spending needs. Households are advised to meet these targeted liabilities by saving each year the constant amount needed to fund in advance each future liability.

Bernheim and Kotlikoff note that the traditional approach to household savings has several flaws:

(1) Lacks a conceptual basis for setting principal targets, namely the rates of income replacement both for postretirement years and for after the death of a spouse;

(2) Fails to adjust properly for household characteristics and circumstances;

(3) Is not well suited for interpreting quantitative targets in terms of concrete consequences;

(4) Fails to integrate saving and insurance decisions in a satisfactory manner;

(5) Fails to integrate multiple savings objectives properly.

Overcoming Barriers to Savings Actions

Undersaving has become so chronic in the U.S. that improving the savings rate sometimes seems hopeless. Yet it is apparent that most educated people understand the logic and merit of saving and, if asked, could offer compelling reasons for doing so. The problem is getting individuals to act based on their attitudes.

Can more be done to link savings behavior to savings belief? We asked William D. Crano of the University of Arizona and Gary W. Selnow of San Francisco State University, experts in social psychology and communications research, to outline some of the barriers to the link between attitude and action. Positive attitudes may not be followed by effective actions. Crano and Selnow suggest that the force of logic alone may not be compelling enough.

Why, they ask, would people armed with sensible information act against their long-term best interests? The problem crops up often in situations where future consequences of current actions take a long time to appear. Although we may assume that almost all employees have a positive attitude toward a comfortable and prosperous life in retirement, there are many reasons their attitude may remain weak. Crano and Selnow maintain that inaction can be understood by looking at components of behavior according to "vested interest" theory.

Components of Vested-Interest Values

Stake	What are the personal consequences, the outcome, of the actions for me?
Salience	Is the issue prominent? Is it a source of concern, worry, or interest to me?
Certainty	What is the likelihood an action will produce the outcome I desire?
Immediacy	How soon will my action result in the desired outcome?
Self-Efficacy	Can I do it? Do I know how to perform the action? Do I have the requisite resources?

The theory has five major elements: stake, salience, certainty, immediacy, and self-efficacy.

Stake Simply stated, vested interest reflects the individual's sense of personal *stake* in the outcome of an attitude-implicated act. A positive attitude may be present, but the attitude may be of low personal relevance. Crano and Selnow have found that stake and four other factors clearly affecting stake represent keys to the consistency, or lack of it, between belief and behavior (see box above). The effective communicator thus needs to be concerned not so much with changing an attitude, but rather with infusing it with personal urgency, or "vesting" it. By enhancing the factors that affect the sense of vested interest, one can strengthen the link of consistency between beliefs and actions.

The important factors influencing the sense of stake or vested interest are (1) the *salience* of the issue in the person's mind; (2) the *certainty* that specific outcomes will ensue from an attitude-consistent action; (3) the *immediacy* of these outcomes; and (4) the "*self-efficacy*" of the individual, or self-confidence that he or she can act effectively to realize the goal.

Salience Retirement can seem remote and therefore not a salient issue, not one of prominent concern or personal relevance, particularly for young professionals at the beginning of their academic careers. But recognizing the importance of a comfortable retirement is necessary if the felt vested interest is to inspire action. If salience is weak, or is not aroused by educational communications, then the sense of vested interest will not be operative. A successful campaign aimed at young and mid-career professionals therefore must be designed to increase the salience of their positive attitudes toward a comfortable and worry-free retirement.

Certainty Certainty is another factor that can either strengthen or weaken attitude-consistent actions. Some people may not accept the close link between investment and savings programs and later-life comfort. Others may feel that current investments will not be sufficient to affect future comfort, or that investment outcomes are unclear and therefore not actionable.

Some financial communications may unintentionally diminish the sense of certainty of outcome. For example, investment data are usually accompanied by statements that disavow guarantees: "*Performance information . . . reflects past investment results. Yields may vary, and the total returns for each [account] may rise or fall. As a result, your accumulation units may be worth more or less than their original price.*" These and other (required) cautionary communications may defuse actionable interest, lessening the likelihood that individuals will act on their positive attitude to achieve retirement goals.

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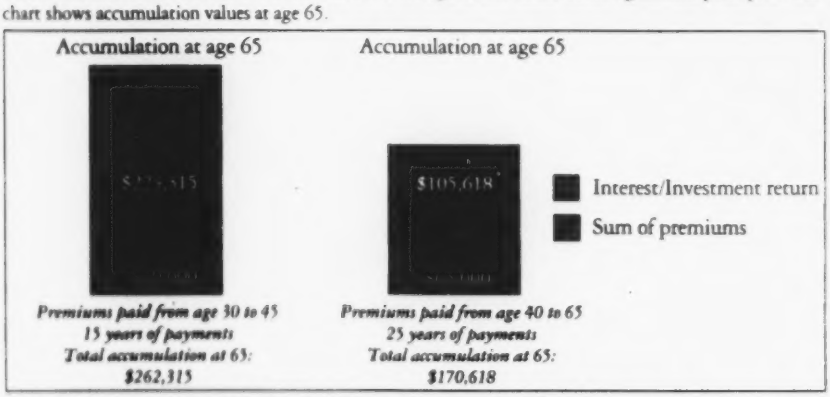
Immediacy Perceptions of immediacy can have a potent impact on the likelihood that an individual will act in accord with a positive attitude. The ultimate pay-off is far distant for a young professional making his or her first investment in TIAA-CREF, or considering a supplemental retirement annuity, or targeting savings for future retirement. The lag between action and sought-after outcome can pose serious barriers to appropriate action.

Figure 1
An Early Start — Illustrating the Value of Compounding

An early start makes a difference. We compare annuity accumulations at age 65 based on *fifteen* years of tax-deferred annuity premiums starting at age 30 and ending at age 45, versus *twenty-five* years of premiums starting at age 40 and ending at age 65. Which produces the most at age 65?

The illustration is based on salary-reduction contributions of $100 from each biweekly paycheck ($2,600 per year) to a tax-deferred annuity. The example assumes that 1/12 of the annual contribution was applied each month and that it earned a 7 percent interest rate. (A 7 percent return is not guaranteed — actual TIAA interest rates or CREF returns could be lower or higher, and CREF doesn't guarantee principal.) The chart shows accumulation values at age 65.



The information in this example is provided only as an illustration of the effects of interest compounding and is not intended to represent actual performance of TIAA or the CREF accounts. The fixed rate shown in this example may differ from that of TIAA, and the CREF accounts will fluctuate with changes in the market.

Illustrations of future financial outcomes based on current initiatives may appear to have impact potential, but they may not be sufficient to lead to action (see Figure 1). Crano and Selnow suggest that communications can heighten perceptions of immediacy by giving detailed information about current contributions, current accumulations, and likely future benefit values. These help to underscore the immediate values in current investing for future benefit.

Self-Efficacy The concept of self-efficacy can have important implications for retirement-savings behavior and communications intended to influence it. Communications that bolster perceptions of a person's own ability to act to save for retirement have a better chance to be persuasive, particularly in a savings campaign targeted at a younger audience. A potential investor, for example, may need assurances that it's easy to start a first-time annuity or supplemental retirement annuity, or to transfer accumulations among different accounts in a retirement plan. And a young person at the outset of a career may feel unable to spare limited funds to invest at all for future retirement income. Information that emphasizes the power of compounding to make even small investments grow over time can strengthen a sense of confidence that even with a small disposable income, one can in fact save for retirement security.

Applying Vested-Interest Theory to Changing Behavior

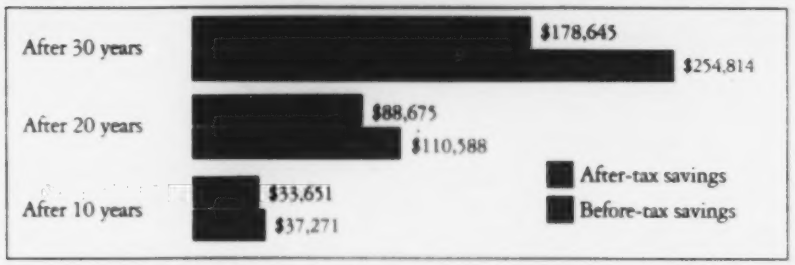
As outlined, vested-interest theory postulates that weakening of any of the component parts of vested interest may seriously weaken the link between attitudes and expected actions, no matter how highly valued the outcomes of such actions are said to be. Consequently, a communications program that fortifies these critical factors stands to increase the sense of vested interest. Logically, this should result in greater consistency between attitudes and subsequent actions.

Crano and Selnow suggest that a successful strategy for financial communications depends on first determining answers to the following queries:

- What are participants' attitudes toward a comfortable life in retirement? We assume a positive response, but is the assumption correct? Do attitudes vary as a consequence of age, income, experience, or other characteristics? How can attitudes be changed if they are not as anticipated?
- Assuming that attitudes are positive, to what extent are they vested? This question may be particularly relevant for younger employees who, for a number of reasons, may hold positive — but nonvested — attitudes toward a secure and prosperous retirement and the means of securing it.
- Is investment for retirement a salient issue? Very likely, its salience grows as a person ages, but that does not give comfort to those who would enroll younger people in efforts to maximize their future security. How can salience be enhanced, or at least heightened, to motivate action?
- In addressing the issue of establishing immediacy, when retirement is a long way off, what mechanisms can be used to enhance the immediacy value of investing for the future? How can information be provided that shows the investor an immediate tangible outcome of present sacrifices? A typical illustration demonstrates the superiority of using a before-tax (salary-reduction) approach to gain supplemental retirement savings (see Figure 2). Other illustrations can show advantages of regular investing and dollar cost-averaging. Can types of information such as these be improved for greater impact?

Figure 2
Comparing Before-Tax and After-Tax Savings

Contributions of $2,600 per year are made to each plan, with payments made in equal monthly installments. A 7 percent rate of return is assumed. The chart is not illustrative of future TIAA interest rates or of CREF returns.



Before-tax savings illustrate the effect of saving through salary reduction under a Sec. 403(b) plan funded with tax-deferred annuities. Earnings are not taxed and are fully reinvested. (Before-tax savings are taxed as income when received.)

For after-tax savings, only the after-tax investment earnings are reinvested. A 28 percent federal tax bracket is assumed (state and local taxes are not counted).

The information in this example is not intended to represent actual performance of TIAA or the CREF accounts. The fixed rate shown in this example may differ from that of TIAA, and the CREF accounts will fluctuate with changes in the market.

- Perceptions of ease or difficulty are important: How do service providers and employers answer the objection, "I can't afford to invest any more than the bare minimum"? Also, what are investors' perceptions of the difficulties involved in initiating a supplemental retirement annuity, for example, or a personal savings program? Understanding employees' perceptions will help with the development of effective programs.

- The sense of personal relevance varies for different segments of the total eligible population. Should messages be tailored to specific subgroups? One might assume that all groups share the same concerns, questions, and attitudes, and will be equally responsive to the same message. If this assumption does not hold, then different messages and approaches (media, sources, subjects, etc.) should be adopted for different subgroups.

Generally, Crano and Selnow suggest that before courses of action are undertaken to inform, educate, and stimulate interest in active financial planning for retirement, service providers and employers must first understand the barriers to their effectiveness and the factors that can overcome them. Well-designed communications programs will recognize the barriers, which in turn will inform their content, tone, and strategy.

Unfortunately, as Bernheim and Kotlikoff conclude, there has been little success in improving national individual savings rates. And as Crano and Selnow observe, there are strong motivational and situational deterrents to initiating retirement savings actions. For service providers, plan administrators, and plan participants, the outstanding challenge is to recognize that the savings effort — under both regular and supplementary retirement plans — must become an integral part of total personal financial planning.

Conclusion

Following the passage of ERISA in 1974 and the increased regulatory burden placed on defined benefit pension plans, the less complex, fully funded defined contribution approach emerged as a more attractive and increasingly popular alternative, both for primary and for supplementary pension coverage.

Traditionally the standard approach to pensions in the educational community, defined contribution plans are now growing rapidly in other sectors as well. These plans give individuals an active role in the investment of plan contributions, since the responsibility for investment decisions rests with individual participants. Personal financial responsibility also extends to arrangements for supplemental annuity support and additional personal savings, since employer-sponsored pensions are not designed to provide 100 percent of expected retirement income needs.

Good decisions depend on information. And for participants to make the most of the array of retirement investment opportunities they have, reliable and relevant information is essential. So is appropriate individual action.

However, current *consumption* needs and future *savings* needs often conflict. Individuals may erect barriers to savings actions that make it difficult to achieve adequate retirement security. Service providers, employers, and individuals can work together to understand better what the barriers are and to devise ways to overcome them. Vested-interest theory can be particularly useful in helping communicators convince people to translate their high regard for future retirement security into actions to achieve it.

(This report was prepared for Research Dialogues *by Francis P. King, Senior Research Officer, TIAA-CREF.)* ❑

Endnotes

[1] Dallas L. Salisbury and Richard B. Burkhauser, eds., *Pensions in a Changing Economy* (Washington, D.C.: Employee Benefit Research Institute, 1993), 25, Table 2.10.

[2] Ibid.

[3] Federal Retirement Thrift Investment Board, *Thrift Savings Plan—Investments: Options and Operations* (Lompoc, California: UNICOR Print Plant, U.S. Penitentiary, August 1992), 1.

[4] B. Douglas Bernheim and Laurence J. Kotlikoff, "Household Financial Planning and Financial Literacy: The Need for New Tools" (unpublished paper, August 1994).

[5] Eytan Sheshinski and Vito Tanzi, *An Explanation of the Behavior of Personal Savings in the United States in Recent Years*, National Bureau of Economic Research Working Paper, no. 3040 (Cambridge, Massachusetts: National Bureau of Economic Research, July 1989), Table 1; U.S. Department of Commerce, *Survey of Current Business*, vol. 74, no. 8 (August 1994), 15, Table 2.1.

[6] William D. Crano and Gary W. Selnow, "Acting in Accord with One's Beliefs: Vested Interest Theory and Its Implications for TIAA-CREF" (unpublished paper, September 20, 1994).

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